

## ABSTRACT OF DISCLOSURE

In a wireless LAN system chiefly using a millimeter wave, a satellite station is provided with an active phased planar-array antenna, the radiating directivity characteristic of which can be freely changed. When a master station receives a control frame transmitted from the satellite station prior to the commencement of normal communication, the master station transmits a carrier wave. The satellite station determines such a directivity characteristic of an antenna as to receive this carrier wave with the strongest intensity, and fixes the characteristic. Thus, an optimal communication environment can be secured. When the number of errors in a received data frame or the receiving electric field intensity received by the satellite station in normal communication is inferior to a respective predetermined threshold, the deterioration of the communication environment can be coped with by determining again. The power consumption of the master station can be reduced by making the transmitting power of a carrier wave for determining less than the transmitting power at the time of normal communication.